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January 1, 1955, through June 30, 1955

OF THE

ASSISTANT SECRETARY OF DEFENSE

ON

DEFENSE CATALOGING AND STANDARDIZATION PROGRAMS

In accordance with Section 8 of Public Law 436

82D CONGRESS

SUBCOMMITTEE FOR SPECIAL INVESTIGATIONS

OF THE

COMMITTEE ON ARMED SERVICES

UNITED STATES HOUSE OF REPRESENTATIVES

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LETTER OF TRANSMITTAL

DEPARTMENT OF DEFENSE,
ASSISTANT SECRETARY OF DEFENSE,
Washington 25, D. C., July 28, 1955.

Hon. CARL VINSON,
Chairman, Committee on Armed Services,
House of Representatives.

DEAR MR. VINSON: As prescribed by Public Law 436, 82d Congress, there is transmitted herewith the sixth report on the Department of Defense Cataloging and Standardization Programs. This report covers the period from January 1 to June 30, 1955.

In accordance with section 8 of Public Law 436, reports on these two programs have been combined into a single report.

Sincerely yours,

T. P. PIKE.

REPORT OF DEPARTMENT OF DEFENSE ON DEFENSE CATALOGING AND STANDARDIZATION PROGRAMS IN ACCORDANCE WITH PUBLIC LAW 436, 82D CONGRESS, JANUARY 1 THROUGH JUNE 1955

Federal Cataloging Program

IDENTIFICATION

The Federal Cataloging Program within the Department of Defense has again met its scheduled identification commitments as in the last two reporting periods. The military departments and my staff are operating at peak capacity under the extremely compressed identification schedule in order to meet these requirements. Specifically, the successful identification effort is a tribute to the unified effort and vigorous emphasis displayed by the Army, Navy, Air Force, and Marine Corps participating activities.

During the 6-month period from January 1 to June 30, 1955, an additional 371,000 items were completely identified in the Federal Catalog System. This brings us to a cumulative total of 1,601,000 items identified in the System to date, which is approximately 67 percent of the present estimated net total of 2,375,000 items.

As we complete the identification job for all items in a commodity area, the Federal Catalog System for that area moves into a state of maintenance. This involves keeping the area current with uniform identification data for new items entering our supply systems, changes to existing items, and withdrawals of items leaving our supply systems. Specific operating procedures control these maintenance requirements. Last period we reported that 53 of the 125 scheduled commodity areas were completed and were operating under maintenance procedures. During the last 6 months an additional 24 commodity areas were completed, bringing the total completed areas to 77 (appendix A) out of a total of 125. The 77 completed areas consist of 646,000 completed identifications. The remaining 48 scheduled commodity areas in process under the schedule already comprise 955,000 completed item identifications.

During this period we also concentrated on assuring ourselves that industry had absolute and current knowledge of our cataloging program. Several representatives of my staff and the military departments visited approximately 20 representative companies throughout the country and discussed the program and its requirements with top management of these companies. In addition, we participated with one of the largest defense-industry associations in providing to their member companies complete presentations on our cataloging program in two separate conferences and clinics. These visits and conferences are significantly beneficial to our Government-industry relationships on our program.

In June 1955, we convened a 2-day conference of management and technical representatives of all participating activities in the military departments. This conference was devoted to detailed reviews and discussions of the remaining identification requirements and responsibilities, including peak production requirements by activity, by commodity area, and by operation.

As of the date of transmittal of this report, and after so many years of effort, there are just 14 months remaining to complete the identification job. Although the remaining short period is a critical peak in our scheduled identification and maintenance operations, we will complete the development of this comprehensive single language of item identification on schedule.

CONVERSION

"Conversion" means the changeover from the use of existing stock numbers, names, and other identification data to the use of Federal item identification data as the prime identification in all functions, and at all levels, of supply within the Department of Defense.

The number of items in commodity groups scheduled for conversion to Federal catalog data during the period January 1 through June 30, 1955, totaled 56,000 for all of the military services. The total number of items converted during this period was 171,000. The total number of items converted by all of the military services under the program through June 30, 1955, totaled 398,000, which exceeds the total items in groups scheduled for conversion to that date by some 278,000. All scheduled Federal Supply Classification groups and classes have been completed as of June 30, 1955, in all 4 military services, except for 17 groups or classes in the Department of the Air Force, where 7,600 items were not converted. The delay in completing these items resulted from unexpected difficulties encountered in incorporation of Army serviced items (items supplied to the Air Force by the Army) into the Air Force stock lists, which are the basic conversion directives and tools used in effecting conversion at Air Force installations. We have reviewed this matter with the Department of the Air Force, the difficulty has been overcome, and conversion of these items will be completed during the ensuing reporting period. Moreover, the Air Force has indicated that it has more than compensated for this temporary setback through progressive preparation of conversion tools for those Federal Supply Classification groups or classes scheduled to be converted subsequent to June 30, 1955.

During April of this year we inaugurated a series of visits to field activities of the military services. To date visits have been made to major supply activities of each of the military services. Our visits have been mainly to the supply control and stock control points, where the conversion publications and aids were normally developed and used in supply management functions, and to the supply depots where such publications and aids are used to effect conversion to the Federal catalog data. These visits enable us to ascertain whether conversion is complete for those commodity areas where the scheduled completion dates are past, to observe the conversion processes being performed, and to determine the state of readiness for the commodity areas to be converted in the near future. We have found from our visits, as well as through personal contact with the military headquarters activities in Washington, that each of the military services is placing great emphasis on conversion to the Federal catalog data.

Extensive planning and indoctrination has been accomplished and is continuing. Except as cited in the instance of the Air Force, the military supply installations visited to date have experienced no major difficulties in accomplishing conversion to the Federal catalog data and have converted those items scheduled to be completed in an efficient and thorough manner. We are continuing our visits to the field installations, which will also include visits to the consumer type installations in the near future.

Although we have had frequent personal contact in the past with representatives of the military services, who are charged with monitoring the conversion phase of the Federal Catalog Program within their services, we have now provided for regularly scheduled discussions between such representatives and members of our office who are concerned with the conversion phase of the program and who perform the visits to the field activities. These meetings will provide a closer working relationship with and among the military services. We will jointly analyze conversion production, workload data, develop ways and means to anticipate and offset adverse conditions and institute measures aimed at increasing the efficiency of the conversion effort.

In order to assure that we may be in a position to take immediate action to overcome delays in meeting the conversion schedules, and to facilitate our studies pertaining to the possible acceleration of production, we have devised a system of management control which will provide a more comprehensive coverage than heretofore available. This new system of reporting on program status will be implemented so as to become effective during the third calendar quarter and we will have, for the first time, a positive method for program measurement plus the added advantage of being able to provide the services with data relating the status and position of each element of the conversion schedule.

UTILIZATION

"Utilization" is the objective and continuing application of improved management practices, tools, and techniques, inclusive of the use of Federal catalog data, toward the end of effective maximum effectiveness, efficiency, and economy throughout the Department of Defense logistic system.

A significant step toward insuring maximum utilization of Federal catalog data was the issuance of Department of Defense directive 4130.4 on the subject, a copy of which is attached for your information (appendix B). Although the effective date was July 6, 1955, the development and coordination of this document took place during the 6-month period covered by this report. In this period, all elements of the Office of the Secretary of Defense as well as the military departments were forcefully reminded of the need to approach this task on a deliberate and planned basis in view of the potential impact on supply operation.

It is recognized that any directive only takes on meaning as it is implemented and complied with. Under the central direction of the Assistant Secretary of Defense (Supply and Logistics), a systematic program has already been instituted of (1) familiarization with the management tools provided by the Federal Catalog Program, (2) assistance in the use of these tools in each supply function, and (3)

compilation of management improvements which resulted from or were facilitated by such utilization. In order that such an approach be as thorough as possible, it is planned that the above steps be applied (1) to each supply function through the appropriate office of the Office of Secretary of Defense and (2) to selected commodity groups once these groups have been converted by all three departments. This constitutes the plan of action which will be followed throughout the Department of Defense.

While not minimizing the potential contributions of the Federal catalog data toward improved supply operations, it is emphasized that the application of such data is so intermingled with related management improvement activities that it is not possible to attribute specific dollar savings to the catalog data application. It is intended, however, that all possible utilization of such data be attained and recorded.

In certain Department of Defense-wide and intradepartmental operations, Federal catalog data utilization has already been incorporated as a recognized factor in improving supply management so that the effect of such utilization will automatically expand as conversion progresses. For example, the Materiel Redistribution Division, which has responsibility for Department of Defense excess screening, started publishing excess listings by Federal Supply Classification groups which aids field activities immeasurably in identifying excesses generated elsewhere which they may be able to use. To further expedite screening, this Division is also cross-referencing excess lists where conversion is completed in some, but not in all the services. Of course, with the completion of conversion, such cross-referencing will no longer be necessary and the redistribution of excesses will be increased and accelerated through universal use of the Federal catalog. In Army, a Functions Assignment Board has been established which has the responsibility for reassignment of logistics responsibilities in terms of Federal Supply Classification groups or classes in step with the Department of Army schedule for conversion to the use of Federal catalog data. These reassignments are to be based, whenever practicable, on the principle that all logistics functions relating to a particular commodity group or class be assigned to a single Technical Service.

Standardization Program

In our last report we advised you of our efforts to establish an accelerated Defense Standardization Program based on a systematic and comprehensive analysis of all categories of equipment and supplies to replace the limited approach to standardization which had been utilized. During this reporting period we assigned responsibility for standardization to the Army, Navy, and Air Force of 506 of the 517 existing classes of commodities in the Federal Supply Classification. Eleven classes were not assigned either because they lack standardization potential or are being withheld for further study.

The Federal Supply Classification was used as the basis for making the assignments to the military departments in consonance with Public Law 436. The utilization of the Federal Supply Classification in the important function of standardization is an outstanding example of the adoption of the Federal Catalog System as a major tool in the improvement of supply management.

In addition to the assignment of classes during this reporting period, a manual, entitled "Military Manual for Standardization," was completed and provided to the military services for their use. This manual gives detailed policy and procedural guidance on the responsibilities associated with the assignment of commodity classes.

A program for achievement during fiscal year 1956 was established and is undergoing joint study with the military departments. The program guidance for fiscal year 1956 is designed to effect an orderly transition from the existing standardization effort to the accelerated program. The orderly phasing from the old program to the new program is essential in order that no slowdown will occur with respect to the 2,400 specification and standard projects now in progress and that operations under the new program may be initiated as quickly as possible.

While our major efforts have been devoted to the establishment of the new Standardization Program, progress has been achieved in significant areas under existing procedures. As noted in appendix C, 127 separate specifications have been consolidated into 53 for use by all of the military departments, services, and bureaus. Since passage of Public Law 436, 1,035 specifications have been consolidated into 435.

As noted in appendix C, 97,061 generally similar items have been eliminated from the military supply systems during this reporting period. It is important to recognize that the actions and savings listed in appendix C do not show the full scope of the standardization efforts nor its benefits. Vast monetary savings result that cannot be computed while many of the benefits are not financial.

Our Standardization Program has been geared toward improving the performance of the various logistics functions. When standardization achieves a reduction in the varieties of items as shown in this report, it is obvious that the supply system has been simplified and becomes more economical to operate. With these benefits come a more effective logistics support to the operating forces. These intangible and immeasurable benefits, the scope of which can only be inferred, are derived from the Defense Standardization Program and will accrue not only for the current period but for the life of the standardization action.

The program for the conversion of Army, Navy, and Air Force specifications to military or Federal specifications was scheduled for completion by July 1, 1955, and, except for a relatively few departmental specifications in the process of completion, this schedule has been met. This means that hereafter all specifications will fall in either the military or Federal series and that separate departmental or service specifications will no longer be issued. This is a significant step toward unifying the military requirements.

Appendix D contains examples of typical accomplishments resulting from standardization actions completed during this reporting period.

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APPENDIXES

APPENDIX A

Federal Cataloging Program

Commodity Areas in Maintenance

FSC Code No.	*Title*
10 (except 1075)	Weapons.
1075	Degaussing and Mine Sweep Equipment.
12	Fire Control Equipment.
1365	Chemical Warfare Agents.
19	Ships.
20	Ship and Marine Equipment.
22	Railway Equipment.
23	Motor Vehicles, Trailers, and Cycles.
24	Tractors.
25	Vehicular Equipment.
26	Tires and Tubes.
31 (except 3120)	Bearings.
32	Woodworking Machines and Equipment.
35	Service and Trade Machinery.
36	Special Industry Machinery.
37	Agricultural Machinery and Equipment.
40	Rope, Cable, Chain, and Fittings.
41	Refrigeration and Air Conditioning.
42	Fire Fighting, Rescue, and Safety Equipment.
43	Pumps and Compressors.
44	Furnace and Steam Plant Equipment.
45	Plumbing, Heating, and Sanitation Equipment.
46	Water Purification and Sewage Treatment Equipment.
47	Pipe, Tube, Hose, and Fittings.
48	Valves.
49	Maintenance and Repair Shop Equipment.
52 (except 5220)	Measuring Tools.
5320	Rivets.
5325	Fastening Devices.
5335	Metal Screening.
5345	Discs, Wheels, Stones, and Abrasives.
5350	Abrasive Materials.
54	Prefabricated Structures and Scaffolding.
55	Lumber, Millwork, Plywood and Veneer.
56	Construction and Building Materials.
5920	Fuses and Lightning Arresters Switches.
5925	Circuit Breakers.
5960	Electron Tubes.
5965	Handsets, Head-sets, Microphones and Speakers.
5970	Electrical Insulators and Insulating Materials.
5975	Electrical Hardware and Supplies.
5977	Electrical Contact Brushes and Electrodes.
5985	Antennae, Waveguides, and Related Equipment.
5995	Cable, Cord, and Wire Assemblies.
62	Lighting Fixtures and Lamps.
63	Alarm and Signal Systems.
65	Medical, Dental, and Veterinary Equipment and Supplies.
67	Photographic Equipment.
68	Chemical and Chemical Products.
69	Training Aids and Devices.

Commodity Areas in Maintenance—Continued

FSC Code No.	*Title*
71 (except 7105)	Furniture.
7105	Household Furniture.
72 (except 7210)	Household and Commercial Furniture and Appliances.
7210	Household Furnishings.
73	Food Preparation and Serving Equipment.
74	Office Machines.
75	Office Supplies.
76	Books, Maps, and Other Publications.
77	Musical Instruments, Phonographs, and Home Type Radios.
78	Recreational and Athletic Equipment.
79	Cleaning Equipment and Supplies.
80 (except 8010)	Paints, Brushes, Sealers, and Adhesives.
81 (except 8140)	Containers and Packaging Materials.
8140	Ammunition Boxes, Packages, and Special Containers.
83 Phase I	Furs and Textiles Except Notions.
83 Phase II	Notions, Leather, Shoe Materials, Tents, and Flags.
84	Clothing and Individual Equipment.
85	Toiletries.
87	Agricultural Supplies.
88	Live Animals.
89	Subsistence.
91	Fuels, Lubricants, Oils, and Waxes.
93	Nonmetallic Fabricated Materials.
94	Nonmetallic Crude Material.
96	Ores, Minerals, and Their Primary Products
99 (except 9905)	Miscellaneous.
9905	Signs and Advertising Displays

APPENDIX B

JULY 6, 1955.

Number 4130.4

DEPARTMENT OF DEFENSE DIRECTIVE

UTILIZATION OF FEDERAL CATALOG DATA

I. PURPOSE

The purpose of this Directive is to provide for the establishment and correlation of Department of Defense policies and programs governing the use and application of Federal catalog data in the Department of Defense.

II. OBJECTIVE

A. To provide for prompt and continuing action on the part of all elements of the Office of the Secretary of Defense, the military departments, and other agencies of the Department of Defense to utilize Federal catalog data to the maximum extent for the purpose of improving materiel control operations within the Department of Defense Supply System.

III. GENERAL

A. The Federal Catalog System provides for the first time throughout the Department of Defense a complete common language of catalog data insofar as item names, stock numbers, item identifications, and uniform commodity classifications are concerned. This means that upon completion of conversion to the use of this uniform identification language as the prime identification data, supply management adjustments and improvements can be facilitated.

B. "Utilization," insofar as this directive is concerned, pertains to the management application of the common language of item identification both within and among the military services, particularly with respect to improvements and adjustments which it makes possible.

C. The introduction of such common identification data in all supply operations and management requires careful analysis to insure their utilization within and among the military services, particularly in all aspects of cross-servicing This

involves each level of operation and management in each materiel control function of the following major management areas: (1) research and development; (2) materiel planning, including the development and review of materiel requirements; (3) procurement and production; (4) inventory and distribution management; (5) receipt, storage and issue; (6) traffic management and transportation; (7) maintenance, rebuilt and repair; (8) excess redistribution and surplus disposal.

IV. POLICIES

A. The Federal identification data developed for each item of materiel will be used as the prime identification data in all materiel control functions at all levels of management and operations within the Department of Defense. (This does not preclude the use of management codes.)

B. As the Federal Catalog System reveals duplicate items, adjustments will be developed and programed throughout the responsible policy, staff, and operating elements of the Department of Defense so that, at each point and level of administration and operation, there will be: (1) elimination of unnecessary duplication in each materiel control function; (2) consolidation, reappraisal, and reduction of total inventories; (3) an increased number of items of materiel used in common; and (4) a greater degree of cross-servicing of all types.

C. Adjustments and improvements, which the Federal catalog data make possible, will be programed to take place in consonance with the applicable identification and conversion schedules.

V. RESPONSIBILITIES

A. The Assistant Secretary of Defense (Supply and Logistics) has been assigned responsibility over the utilization aspects of the Federal Cataloging Program directed by Public Law 436, 82d Congress, as well as the identification and conversion phases.

B. Each element of the Office of the Secretary of Defense responsible for materiel control functions shall evaluate and determine the methods to be employed in the utilization of Federal catalog data in its area and shall take action to insure that adjustments and improvements are programed and implemented in its management area on a Department of Defense-wide basis.

C. Each military department and other operating agency shall be responsible for programing and implementing adjustments and improvements in consonance with policies and programs of the Office of the Secretary of Defense, throughout all its operating and management levels, and for coordinating with other Department of Defense agencies insofar as interservice applications are programed by the responsible element in the Office of the Secretary of Defense.

VI. IMPLEMENTATION

A. Each responsible element of the Office of the Secretary of Defense and each military department and other operating agency shall report to the Assistant Secretary of Defense (Supply and Logistics), as of June 30 and December 31 each year, on the status, progressive development, and implementation of its plans and programs for the use and application of Federal catalog data.

B. The Office of the Assistant Secretary of Defense (Supply and Logistics) shall make such reviews as necessary of instructions and procedures, appropriate reports, and actual operations to assure that progressive action is being taken throughout all elements of the Department of Defense to achieve the policy requirements of this directive.

C. E. WILSON, *Secretary of Defense.*

APPENDIX C

STANDARDIZATION PROGRAM

Statistical Data

Section 10 (a), Public Law 436, 82d Congress

Consolidation of specifications: 127 separate specifications have been consolidated into 53 specifications for the use of all of the military departments, bureaus and services.

Section 10 (b), Public Law 436

Reduction in items of supply: During this reporting period, the military departments, bureaus and services and commands achieved a reduction of 97,061 generally similar items in their supply systems.

Section 10 (c), Public Law 436

Duplications eliminated in services, space, and facilities: The military departments reported savings of 1,427,585 cubic feet of space resulting from standardization operations.

Section 10 (d), Public Law 436 (other information)

Man-hour savings: The military departments reported savings of 109,170 man-hours resulting from standardization operations.

Estimated dollar savings: The three military departments have reported estimated savings which total over $7,119,000.

APPENDIX D

STANDARDIZATION PROGRAM

Typical Accomplishments Resulting From Standardization Operations

Commodity or process	Responsible activity	Savings or other benefits
Vehicle reflectors	Joint	Military specification MIL-R-12144 for vehicle reflectors provides a single reflector for stock and issue and permits interchangeability for replacement purposes. The adoption of this single standard reflector will replace approximately 50 different types and sizes now in the supply systems and thus simplify and facilitate the maintenance problem.
Canned fruits and vegetables.	do	Standardization in this area has resulted in a reduction of the number of sizes, grades, types, and styles from 193 to 99. This action completes the standardization through simplification of all canned goods in FSC Class 8915, fruits and vegetables.
Electric voltages	do	Military standard MIL-STD-255 establishes standard voltages for new power-supply systems and for the equipment used with these systems. For alternating current circuits, 15 standard voltages were established in the range from 120 to 4,000 volts. For direct current circuits, 8 standard voltages were established in the range from 7 to 500 volts. As an example of what this standardization accomplishes, single-phase alternating current systems formerly rated at 110, 115, 120, and 125 volts are now standardized at 120 volts. Equipments used with this 120-volt standard system are standardized at 115 volts. Rather than 4 separate items of equipment for each voltage (110, 115, 120, and 125) only 1 item will be required in the supply system. This standard also encourages the use of standard voltages for replacement items where practicable.
Railroad trackage	do	A single specification MIL-R-3518 and a military standard MS-35400 reduces from 9 to 3 the different types and sizes of railway T rails for future procurement and use at military installations.
Jewel bearings	do	Military standards MS35450 through MS35454 reduce from 93 to 51 the number of jewel bearings used in military timepieces; 5 different types of bearings are covered by these military standards. Major American watch-manufacturing companies participated in this standardization work. Watch bearings have been considered critical items to national defense. This standardization will reduce the varieties and quantities of jewel bearings stocked in the supply system.
Oxygen	do	Standardization of technical requirements and test methods for gaseous and liquid oxygen for use in medical, aviation breathing, and cutting and welding applications has resulted in the approval of Federal specification BB-O-925, which was prepared by the Department of Defense. Annual procurement of oxygen by the military amounts to millions of dollars and, therefore, the use of 1 instead of the 5 specifications, previously used, will result in substantial savings. The use of identical test procedures will reduce the amount of laboratory apparatus and man hours required for inspection and testing.

Typical Accomplishments Resulting From Standardization Operations—Continued

Commodity or process	Responsible activity	Savings or other benefits
Forging die shanks, notches, and dowels.	Joint	Military standard MIL-STD-241 pertains to a method of attaching forging dies to forging presses, and its adoption will reduce an estimated 200 to 250 methods to a single method for each 5 capacity groupings of presses. A forging die in the past was made with a shank to fit a specific press. In many instances, and particularly during mobilization periods, the military departments have been obliged to provide funds for tooling of dies each time a contract was made for forgings because of noninterchangeability of dies. Adoption of this new standard offers the following benefits: precludes the scrapping of expensive dies because of noninterchangeability; makes possible the stocking of dies of military importance for loan to any forging shop; allows contractors to place orders for forgings in their locality; places forging contractors on a more competitive and equitable basis for bidding, thus reducing costs. The semiannual report for the period July through December 1953 advised of the intra-Navy standardization of these items. The extension of this standardization Department of Defense-wide illustrates that departmental effort frequently results in an interdepartmental adoption of a military standard to the benefit of all military departments.
Spikes, railway	do	Military standard MS-35464 reduces the number of types of railway spikes from approximately 15 to 1, with only 2 sizes of this type. Adoption of this standard will simplify track maintenance, with a commensurate saving in time and funds.
Drafting-room practice	do	Military standard MIL-STD-9, Screw Thread Conventions and Methods of Specifying, establishes uniform drafting-room practices for representing and specifying screw-thread requirements on design drawings prepared by or for the Department of Defense. This standard will save time and avoid misinterpretation of thread specifications and errors in the manufacture of screw thread items.
Aircraft fuel	do	Military specification MIL-F-5624C establishes 3 standard fuels for all jet and turbine powered aircraft other than obsolescent types; 2 of these standard fuels are recognized equivalents to fuels used by all NATO countries. The appropriate NATO symbols for these fuels are included in the specification to further inter-NATO procurement and supply support for this important military item.
Handtools	do	A continuing project involving 55 different kinds of handtools, under study by a military task group since May 1952, thus far has resulted in the reduction in varieties of types and sizes of handtools from more than 9,000 to approximately 3,600. The following examples are typical of the reductions accomplished:

Tool item	Original items	Standard items	Items reduced
Hammers	141	67	74
Pliers	93	40	53
Wrenches [1]	1,636	596	1,040
Screwdrivers	787	125	662
Twist drills	900	225	675
Hand files	783	351	432
Hacksaw blades	70	18	52
Hand taps	968	397	571
Vises	266	50	216
Total	5,644	1,869	3,775

[1] Adjustable nut and bolt, box and open-end, ratchet, and socket wrenches.

Typical Accomplishments Resulting From Standardization Operations—Continued

Commodity or process	Responsible activity	Savings or other benefits
Packing intravenous solutions.	Joint	The packing of intravenous solutions has been changed from a nailed wood box to a less-expensive wirebound box constructed in accordance with military specification MIL–B–107. Within the wirebound box a master carton, containing 2 units fabricated of weather-resistant fiberboard, has replaced a 200-pound test commercial corrugated fiberboard carton and waterproof case liners. This eliminates the use of waterproof barriers. The 1st procurement of this item for the Army Medical Corps resulted in a saving of $15,208.
Markers, self-luminous	do	Adoption of a single military specification, MIL–M–3935, reduces to 1 document the requirements of the 3 military departments for luminous markers. The markers are safety devices intended to permit the location of personnel, vehicles, hazards, and passageways in darkness without connection to any power source or the risk of open flame. The old-style marker used radium-activated materials which emitted alpha and gamma rays to produce the lumination effect. The items covered by the new specification use materials produced in an atomic pile. The use of this material reduces the hazards of radiation to personnel. The less hazardous marker materially reduces the personnel protection required during storage.
Tents	do	Standardization-simplification review of 278 items of tents and major tent component parts has resulted in a reduction to 86 items which have been determined standard for future procurement. Much of this reduction was accomplished by the development of general-purpose tents which replace specialized tents previously procured.
Crane shovels	do	Military standard MIL–STD–179 establishes a maximum of 17 different power-excavator crane shovels, replacing approximately 66 types and capacities (units) previously procured. Up to 75–80 percent of military procurement will be satisfied by 3 or 4 different units. Most important, it is now possible to develop interchangeability of the component parts and attachments for each unit between different manufacturers. This will reduce the number of different items required in stock. Fewer replacement items reduce the "down time" (to effect mechanical repairs) of these equipments, thus increasing their availability for service; a most important tactical advantage to a military mission.
Projection lamps	do	Military standards, MS–35401 through MS–35405, reduce the number of incandescent projection lamps approved as standard for future procurement from approximately 40 different types and sizes to 15.
Titanium alloy sheet and strip.	do	Military specification MIL–T–9046A provides the interdepartmental requirements for this comparatively new and important material. This specification supersedes the limited coordination specifications of 2 services.
Airborne stores and associated suspension equipment, general design criteria for.	Joint; Bureau of Aeronautics, Navy, and Air Force.	Specification MIL–A–8591B(ASG) provides for the following: (*a*) Future conservation of money and engineering effort by establishing similar design criteria between the Navy Bureau of Aeronautics and the Air Force, thus facilitating procurement of airborne stores and suspension equipment on a single-service basis. (*b*) Achieves interchangeability permitting interservicing or supply.
Weight and balance control data (for airplanes and rotocraft).	do	Specification MIL–W–25140(ASG), which prescribes a uniform method of presentation of data during the life of an aircraft contract with respect to weight and balance, was completed during this reporting period culminating several years of work.

Typical Accomplishments Resulting From Standardization Operations—Continued

<table>
<tr><th>Commodity or process</th><th>Responsible activity</th><th>Savings or other benefits</th></tr>
<tr><td>Item reductions</td><td>Corps of Engineers, Army.</td><td>Standardization-simplification efforts within the Corps of Engineers is typical of the reductions in the number of items taking place in the military supply systems. Through these efforts the Corps of Engineers will establish (1) the minimum number of types and sizes of all categories of engineers' items for procurement, storage, and issue, to meet operational requirements; and (2) those items now in depot stock which are functionally suitable for issue as substitute items for standard items. This effort to date has produced the following results:
<table>
<tr><th></th><th>Original items</th><th>Standard items</th><th>Items reduced</th></tr>
<tr><td>Lethal devices</td><td>1</td><td>1</td><td>0</td></tr>
<tr><td>Blasting apparatus</td><td>20</td><td>12</td><td>8</td></tr>
<tr><td>Anchors and anchor chain</td><td>21</td><td>17</td><td>4</td></tr>
<tr><td>Fuel</td><td>4</td><td>3</td><td>1</td></tr>
<tr><td>Outboard motors</td><td>11</td><td>4</td><td>7</td></tr>
<tr><td>Cable and insulated wire</td><td>167</td><td>142</td><td>25</td></tr>
<tr><td>Precision instruments and photoapparatus</td><td>659</td><td>521</td><td>138</td></tr>
<tr><td>Wire rope and bare wire</td><td>81</td><td>68</td><td>13</td></tr>
<tr><td>Diving apparatus</td><td>56</td><td>52</td><td>4</td></tr>
<tr><td>Books and periodicals</td><td>117</td><td>112</td><td>5</td></tr>
<tr><td>Special wearing apparel</td><td>110</td><td>103</td><td>7</td></tr>
<tr><td>Brooms</td><td>146</td><td>128</td><td>16</td></tr>
<tr><td>Metal bars and rods</td><td>268</td><td>208</td><td>60</td></tr>
<tr><td>Metal plates and sheets</td><td>61</td><td>43</td><td>18</td></tr>
<tr><td>Metal shapes</td><td>71</td><td>55</td><td>16</td></tr>
<tr><td>Foundry apparatus</td><td>68</td><td>60</td><td>8</td></tr>
<tr><td>Paints and paint ingredients</td><td>448</td><td>356</td><td>92</td></tr>
<tr><td>Total</td><td>2,309</td><td>1,885</td><td>422</td></tr>
</table></td></tr>
<tr><td>Gaskets</td><td>do</td><td>Physical examination of 9,200 gasket supply items is currently being made to determine which items can be eliminated from the supply system. Criteria used to evaluate the possibility for elimination include (1) the feasibility of field fabrication from bulk gasket material, and (2) the inclusion of gaskets in sets or repair kits for specific application. To date, 1,310 items have been determined necessary for retention in the supply system. It is estimated that most of the remaining 7,890 items (86 percent) will be eliminated. The potential elimination of 7,890 items from the supply system is estimated to reduce gasket inventories by $1,250,000.</td></tr>
<tr><td>Packing electric-lighting sets.</td><td>do</td><td>Packing of electric-lighting sets has been standardized in the Army to afford better protection. This has resulted in a freight reclassification and reduced rates. Estimated annual monetary savings is $52,000.</td></tr>
<tr><td>Packing crane boom</td><td>do</td><td>Packing of this item has been simplified by attaching the lower half of the boom to the truck-mounted crane for shipment. The upper half of the boom is placed on the lower half and secured with bolts and wire. This method replaces the practice of shipping booms in sheathed wood crates. Annual savings are estimated at $28,132.</td></tr>
<tr><td>Machine screws</td><td>Ordnance Corps, Army.</td><td>Reduction of service stocks of machine screws is resulting from a review of plating requirements and substitution of cadmium or zinc-plated screws wherever possible in lieu of similar screws with same physical properties but with various other finishes. This simplification action is a continuing process and has resulted in a reduction of 824 line items to date. Estimated annual savings resulting from this action are—
1. Savings in man-hours for 1 year resulting from reduced handling during procurement, storage, and issue are computed as 55,279 man-hours or $110,557 in labor.
2. Savings in cubic feet (it is estimated that 1 cubic foot of space will be saved for each item at each of 57 activities) total 46,968 cubic feet.</td></tr>
</table>

Typical Accomplishments Resulting From Standardization Operations—Continued

Commodity or process	Responsible activity	Savings or other benefits
Tow bars	Ordnance Corps, Army	It has been determined that tow bar, drawing No. 8383802, is satisfactory for use on heavy recovery vehicle M51. This will eliminate tow bar, drawing No. 8709529, and reduce the cost of the tow bar for the M51 vehicle from $450 to $240, as well as reduce the weight from 750 to 400 pounds; 6 component parts are eliminated from the supply system and the dollar savings resulting from this standardization action, based on a current procurement of 188 vehicles, is estimated at $39,480.
Towing cables	do	A study of ordnance drawings on towing cables currently used on all vehicles reveals that broken cable assemblies must be completely replaced by new assemblies. This is necessary because towing cables now used employ swedged-type eyes. This study has revealed that all currently used towing cables can be feasibly replaced by 3 newly designed cables. These new cables each employ eye fittings which are reusable. Therefore, broken cables (which usually break near the eye) can readily be repaired. Should the cable break near its center, the desired length of cable can be cut from bulk wire-rope stock, utilizing the same reusable eyes. Savings resulting from the study are estimated at $300,000.
Radiac detector charger	Signal Corps, Army	Military specification MIL-C-13958(SigC), for radiac detector charger PP-995( )/UD, is in the final stage of development and is expected to replace a more complicated and expensive item costing approximately $45. The simplified model is expected to cost about $17. In addition, lower battery costs will result because a smaller and simpler battery supply will be used. The new model will operate as a charge for 4 different dosimeters, thus eliminating the need for separate chargers. This will result in lower costs for procurement, storage, and issue, and reduce inventory investment. Savings in anticipated procurement of 20,000 units are estimated at $560,000.
Plotting equipment	do	Military specification MIL-P-13967(SigC), for plotting equipment AN/TSA-1( ), has been developed to incorporate the requirements for this equipment. Previous procurement has been accomplished by preparing procurement data consisting principally of descriptions of commercial items of a single manufacturer. This new specification furnishes more comprehensive data that will permit more competitive bidding. This will result in an estimated savings of 5 percent, or $3,800, based on pending procurement of $76,000.
Radio receiver	do	Specification MIL-R-13947(SigC) covers a new low-cost version of radio receiver R-390( )/URR. This new receiver is electrically and mechanically interchangeable with the previous design, and results in a slightly improved model. The new model, through the elimination of parts and the use of more economical methods of construction, should result in lower manufacturing costs and require less maintenance while in service. Some of the advantages of the new model are— (a) The receiver has been constructed to permit squelch operation. However, the only part of the squelch circuit included in the economy model is the necessary connections. The squelch relay and associated tube are not included, but mounting provisions are incorporated so that these components may be added should the radio receiver be used for this purpose. (b) 2 filaments have been paralleled, giving greater tube-life expectancy. (c) 1 radio frequency stage has been eliminated as it was found that this stage did not provide increased performance to an advantageous extent. (d) Better intermediate frequency selectivity has been obtained through the use of electro-mechanical filters.

Typical Accomplishments Resulting From Standardization Operations—Continued

Commodity or process	Responsible activity	Savings or other benefits
Radio receiver—Con.	Signal Corps, Army	2 current contracts are being modified to specify the economy model. Approximately 3,300 radio receivers remain to be built under these contracts. In addition, 500 economy models will be awarded under a new contract. It is expected that the economy model will result in a saving of $300 to $400 per item, thus resulting in substantial savings to the Government. Present planning indicates that an additional 1,500 models will be procured in fiscal year 1955 and 2,700 in fiscal year 1956. The total estimated savings, resulting from the adoption of the economy model, is approximately $2,500,000.
Chemicals	Chemical Corps, Army.	Subsequent to the transfer of logistic responsibilities for certain chemicals from other Army services to the Chemical Corps, a standardization study was made. This study resulted in the elimination of 20 grades and 43 different container sizes for chemicals. Annual savings from 6 of these items are estimated at $22,462. Savings from the remaining items have not been determined.
Packaging grenades	do	Standardization action has resulted in the adoption of a single water-resistant filler (type W6c) for use in packaging 6 different types of grenades. This filler replaces a nonwater-resistant filler (type 19–10) and eliminates the need for a caseliner. Annual savings are estimated at $68,176.
Preservation	Transportation Corps, Army.	Determination reached on the degree of preservation needed for 2,579 bin stock items resulted in the lowering of preservation requirements for storage. Additional preservation will be added only for those items which are subsequently shipped overseas. Annual savings are estimated at $32,000.
Packing catsup	Quartermaster Corps, Army.	Packing of 14-ounce catsup (24 per case) and 12-ounce chili sauce (24 per case) in commercial pack has been service tested and approved for domestic and overseas use. The adoption of the commercial pack, in lieu of fiberboard pack with cushion bag for overseas use, has resulted in annual savings of $145,754. Shipments to the Army Forces Far East have been exempt from this decision to use commercial pack because of adverse conditions for distribution and handling in the Far East. The packing instructions were changed by quartermaster letter to headquarters, Quartermaster Market Center System.
Tinplate, terneplate	Bureau of Ordnance, Navy.	Investigations of the use of tinplate versus terneplate for fabrications of tear-strip metal containers indicated that 0.75-pound electroplated tin coating can be substituted for 8-pound terneplate without sacrifice in quality or performance. This equality of tinplate and terneplate pertains to corrosion resistance and applies only to painted containers. Terneplate consists of approximately 85 percent lead and 15 percent tin, or about 1.25 pounds of tin in 8 pounds terneplate. The use of 0.75-pound electroplated tin for painted containers as compared to previously used 8-pound terneplate will result in the savings of tin, a most critical item to national defense. Bureau of Ordnance design activities are specifying 0.75-pound tinplate as an alternate to 8-pound terneplate on all new and existing designs for tear-strip painted containers. Because of the large quantities purchased of these containers, savings in material alone (lead and tin) are estimated at $63,000 for the construction of 1 type of container. Technological developments taking place in industry, whereby new protective coatings to metal containers completely eliminate the use of tin, are being closely followed with the intent of eliminating the use of tin for this military requirement.
Motor generators	Bureau of Ships, Navy.	A motor-generator power-supply standardization program is being pursued by the Bureau of Ships which, although only 50 percent completed, has already provided significant savings. Standardization of ratings and performance requirements has reduced the number of types from 100 to 51, a net reduction of 49. Standardization of mounting dimensions has resulted in greater interchangeability of motor-generator sets supplied by 2 different manufacturers. Standardization of the control-equipment sizes has also resulted in a savings of 20 to 30 percent in volume and 10 to 20 percent in weight.

Typical Accomplishments Resulting From Standardization Operations—Continued

Commodity or process	Responsible activity	Savings or other benefits
Electric meters and parts.	Air Force	This project involved the consolidation of 55 voltmeters and 66 meters (arbitrary scale) into 1 each of these items, respectively. The catalog price of the voltmeters averaged $13.50, compared to a firm contract price of $9.68 for the item selected as standard. Units procured averaged 226 by $3.82 (savings per item) by 55 (items consolidated), or $47,482.60, estimated annual savings. The catalog price of the meter (arbitrary scale) averaged $5, compared to a firm contract price of $4.20 for the meter selected as standard. Units procured averaged 3,719 by $0.80 (savings per item) by 66 (items consolidated), or $196,363.20 estimated annual savings. Estimated total annual saving is $243,845.
Canopies	do	A recently completed standardization study on canopies used on T–33 and R–T33 aircraft resulted in modification of all canopies in stock. The number of items stocked to meet current requirements was reduced from 21 to 4. The saving due to this reduction in items in the supply system is estimated at $20,000.
Dust cover assemblies	do	A standardization study resulted in a recommendation to the contractor that the redesign of all items would provide a single item meeting all requirements. The acceptance of this proposal resulted in the reduction of 6 items to 1, and an estimated savings to the supply system of $4,500.
Packaging	do	Air Force packaging technicians are analyzing packing costs of individual items to develop (*a*) the feasibility of packing by a commercial firm specializing in packing, and (*b*) the possibilities of cost reductions by simplified methods or cheaper materials. Procurement regulations are being rewritten to require a breakout of (*a*) item cost, and (*b*) preservation, packaging, packing, and marking cost per unit, on contracts over $5,000. At present the average fraction of the procurement dollar spent to package Air Force material is estimated to be 6 percent. Even that figure is suspect, for example: GMC, Allison Division, reports a 1.6-percent charge for direct labor and material; Lockheed at Marietta reports a 4.5-percent charge. This new policy will provide a definite means of proving that packaging costs are on the downtrend due to recent developments and changes in packaging concepts.
Multimeters	do	Simplification research on multimeters resulted in a decision that 3 manufacturers' products were interchangeable and met the requirements of specification MIL–M–4269. These items, therefore, may be issued interchangeably. The consolidation of the 3 items that ensued permitted satisfaction of numerous back orders for 2 of the items by using the on-hand stock of the 3d item to fill the back orders. The 3d item had a procurement cost of $10 against $24.50 for the 2 items on back order. Filling the back orders from the available stock produced a savings of $2,798.50 and eliminated many procurement steps otherwise necessary.
Commercial electric meters.	do	As a result of simplification research approximately 35 line items of panel mounted electric meters have been disapproved for future purchase. The requirements for these nonstandard items will be referenced to the standard MR-type meter adopted and covered by specification MIL–M–6A. The standard item provides superior quality at lower cost. Based on projected requirements, a potential savings of $12,422 will be realized.